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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/014,217	10/22/2001	Senthil Sengodan	550.76USC1	5156

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EXAMINER	
HYUN, SOON D	
ART UNIT	**PAPER NUMBER**
2616	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/03/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/014,217	SENGODAN, SENTHIL	
	Examiner	Art Unit	
	Soon D. Hyun	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 October 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-69* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *13-21* is/are allowed.

6)☒ Claim(s) *1-3, 5, 6, 8-10, 22, 23, 26, 27, 29-31, 34, 35, 38-59, 62, 63, and 65-67* is/are rejected.

7)☒ Claim(s) *4,7,11,12,24,25,28,32,33,36,37,60,61,64,68 and 69* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/27/2006 has been entered.

Claim Objections

2. Claims 1, 6, 13, and 34-37 are objected to because of the following informalities:

Each claim recites a limitation "configured to" or "configuring" which is not a positive recitation. Under MPEP 2106, page 2100-8, "language that suggests or makes optional but does not require steps to be performed or does not limit a claim to a particular structure does not limit the scope of a claim limitation."

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. Claims 46-57 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Each claim has a plurality of means plus function, but it is not clear what is disclosed in the disclosure for a structure corresponding to each means plus function, i.e., the corresponding structure is not identified in the specification or drawings.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 2, 6, 8-10, 58, 59, 63, and 65-67 are rejected under 35 U.S.C. 102(e) as being anticipated by Grayson (U.S. Patent No. 6,665,278).

Regarding claim 1, Grayson discloses a method of providing resource discovery (discovery of a target node, TN) comprising:

sending a first request message (a packet M in FIG. 13 to be transmitted to the target node TN in FIG. 13 or node B in FIG. 10 for direct communication, col. 7, lines 9-10 and col. 8, lines 39-42) having a first selected scope (a hop count 0) for direct communication to the target node;

analyzing whether a confirm message (an ACK in FIG. 10) is received from the node B in response to the first request message;

sending a second request message (a second packet M (1)) having a second

selected scope (a second hop count 1) when a confirm message is not received from a discovered resource (the target node), the second scope (the hop count 1) being greater than the first scope.

Regarding claim 2, Grayson further discloses the step of setting timer in response to the first request message and the step of terminating the resource discovery procedure as recited in the claim (col. 2, lines 28-33).

Regarding claim 6, Grayson further discloses that the scope comprises a hop count, the hop count representing a number of nodes in a multicast tree (FIG. 13) that the packet propagates (col. 8, lines 35-67).

Regarding claim 8, refer to the discussion for claim 1. The hop count in the packet is parameters for analyzes by a node receiving the request message.

Regarding claim 9, Grayson further discloses that the parameters comprises hop-by-hop parameters, the hop-by-hop parameters being modified by intermediate nodes during propagation of the packet in a multicast tree (col. 8, lines 35-67 and FIG. 13).

Regarding claim 10, Grayson further discloses that the packet has a destination address (destination parameters) being used by a resource being discovered using the packet to determine whether the resource responds using confirm (ACK) message (col.7, lines 36-54).

Regarding claim 58, refer to the discussion for claim 1. Grayson further discloses a device function 20 in FIG. 2 having instruction or a computer program causing the processor locate a resource, col. 3, line 66-co1.4, line 30).

Regarding claim 59, refer to the discussion for claim 2.

Regarding claim 63, refer to the discussion for claims 6 and 58.

Regarding claim 65, refer to the discussion for claims 8 and 58.

Regarding claim 66, refer to the discussion for claims 9 and 58.

Regarding claim 67, refer to the discussion for claims 10 and 58.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 5, 22, 23, 26, 27, 29-30, 31,35, 38-47, 50-57, and 62 are rejected under 35 U.S.C.103(a) as being obvious over Grayson (U.S. Patent No. 6,665,278).

Regarding claims 5, 22, 26, 27, and 34, refer to the discussion for claim

Grayson discloses a discoverer (an originate node in FIG 13), comprising:

a discovery unit (a microprocessor 12 in FIG. 2); and

an application (a device function 20 in FIG. 2 having instruction or a computer program causing the processor locate a resource, col. 3, line 66-co1.4, line 30) coupled to the discovery unit for locating an endpoint application (a target node).

However, Grayson does not explicitly teach that the originate node transmit the packet to a plurality of target nodes (a multicast group), but Grayson further teaches that the originate node broadcasts a packet to a plurality of nodes (col. 3, lines 45-55

and col. 4, lines 65-67). Therefore, it would have been obvious to one having ordinary skill in the ad to transmit a packet to a group of target nodes (a multicast group) by coping the packet and transmitting the packet to each node of the group to multicast the packet.

Regarding claims 23 and 35, refer to the discussion for claim 2.

Regarding claim 29, refer to the discussion for claim 8.

Regarding claim 30, refer to the discussion for claim 9.

Regarding claim 31, refer to the discussion for claim 10.

Regarding claim 38, refer to the discussion for claim 6.

Regarding claim 39, refer to the discussion for claim 8.

Regarding claim 40, refer to the discussion for claim 9.

Regarding claim 41 refer to the discussion for claim 10.

Regarding claim 42, Grayson further discloses that the application and the discovery unit are co-located in a device.

Regarding claim 43, Grayson further discloses that the application and the discovery unit are separated (not co-located).

Regarding claims 44 and 45, Grayson further teaches that each node has functions of a base transceiver station (relay function) and a wireless terminal (FIG. 13).

Regarding claim 46, refer to the discussion for claims 1 and 34.

Grayson discloses a discoverer (an originate node in FIG 13), comprising:

a discovery means (a microprocessor 12 in FIG. 2) for providing resource discovery; and

a notification means (a device function 20 in FIG. 2, col. 3, line 66-co1.4, line 30) coupled to the discovery means for locating an endpoint application (a target node).

Regarding claim 47, refer to the discussion for claim 2.

Regarding claim 50, refer to the discussion for claim 6.

Regarding claim 51, refer to the discussion for claim 8.

Regarding claim 52, refer to the discussion for claim 9.

Regarding claim 53, refer to the discussion for claim 10.

Regarding claim 54, refer to the discussion for claim 42

Regarding claim 55, refer to the discussion for claim 43.

Regarding claims 56 and 57, refer to the discussion for claims 44 and 45.

Regarding claim 62, refer to the discussion for claims 34 and 58.

Response to Arguments

7. Applicant's arguments filed on 9/27/2006 have been fully considered but they are not persuasive.

Regarding claims 1 and 58, Applicant argues (page 4, lines 4-6 of the Remarks) that "Grayson does not address discovering resources. Indeed, the only discovery that Grayson could be said to make is the discovery of blockages."

Applicant further argues (page 23, lines 2-3 of the Remarks) that the Node B in FIG. 10-12 does not correspond to a discovered resource as recited in the claim, because node B is a known node with a known address and thus, there is no discovery that goes on in locating node B.

Applicant further argues (page 23, lines 20-22 of the Remarks) that the node TN (target node) in FIG. 13 does not correspond to a discovered resource as recited in the claims, nor is the process of routing and re-routing a message to TN a method of providing resource discovery as recited in claim 1. Examiner disagrees.

With reference to col. 7, lines 22-54, col. 8, lines 10-19, FIG. 10-13, Grayson clearly teaches that the node B or the bode TN is a discovered resource, because an acknowledgement message to the application message in FIG. 7 is sent from the node B or the TN if the node is existent or functional, i.e., the node is discovered being existent or functional.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., a known address or a known node for the node B) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See In re Van Geuns, 988 F.2d 1181,26 USPQ2d 1057 (Fed. Cir. 1993).

Regarding claims 5, 22, 23, 26-27, 29-31,34-35, 38-47, 50-57, and 62, refer to the response to the arguments for claims 1 and 58. above, because Applicant does not suggest any additional arguments further to those of claims 1 and 58.

For reasons as discussed above, Examiner believes that the claim rejection is proper.

Allowable Subject Matter

8. Claims 13-21 are allowed.

9. Claims 4, 7, 11, 12, 24, 25, 28, 32, 33, 36, 37, 60, 61, 64, 68 and 69 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. Claims 48 and 49 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Soon D. Hyun whose telephone number is 571-272-3121. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris H. To can be reached on 571-272-7629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

S. Hyun
12/20/2006

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